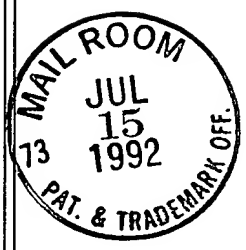

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10/29/92

PATENT

Attorney Docket No. 72044-132-1
GE Docket No. 24-NT-05338

EXPRESS MAIL NO. RB 699 400 56X

DATE OF DEPOSIT: July 15, 1992

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D. C. 20231.

By: _____
Sunil Dutt

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	
Eric B. Johansson et al.	Examiner: not assigned
Serial No.: not assigned	Art Unit: not assigned
Filed: not assigned	INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.97 and §1.98
For: OPTIMIZED CRITICAL POWER IN A FUEL BUNDLE WITH PART LENGTH RODS	

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. A copy of each is enclosed.

Reference AB to Johansson discloses a specific design for water rods in a nuclear fuel bundle, in combination with part length rods. There is no disclosure of pressure drop restoration techniques to improve critical power.

Reference AC to Nelson et al. defines specific design features for accommodating larger water rods into nuclear fuel bundle designs, in combination with part length rods and spacers with ferrule type devices and flow detection tabs at the periphery. There is no disclosure of pressure drop restoration techniques to improve critical power.

Reference AD to Johansson includes a technique to incorporate swirl vanes into a specific nuclear bundle fuel rod spacer construction. The swirl vanes are placed interstitially between the fuel rods. The swirl vanes are not used in combination with the part length rods to cause pressure drop.

Reference AF to Sakurada discloses the placement of fuel rods with varied inter-central distance. The primary purpose of the variation of the inter-central distance is an effective improvement of the moderator density reactivity coefficient and to obtain generous thermal margins during operation. The reference does not set forth the discovery that insertion of part length rods can cause critical power problems in adjacent full length rods nor improving this critical power loss by partially restoring the associated pressure drop.

Reference AG to Campbell discloses swirl vanes. However, there is no suggestion that the insertion of part length rods may cause critical power limitations on the full length rods adjacent the part length rods. Further, there is no suggestion to improve critical power by restoring pressure drop.

Reference AH to Ueda shows a channel for a fuel bundle with a tapered interior. The reference includes part length rods. However, there is no suggestion that the insertion of part length rods may cause critical power limitations on the full length rods adjacent the part length rods. Further, there is no suggestion to improve critical power by restoring pressure drop.

None of the other cited references address the problem of critical power loss caused on full length rods adjacent part length rods because of the presence of the part length rods. Further, nowhere is it proposed in any of the references to restore pressure drop so that critical power may be improved.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Please charge any additional fees or credit any overpayment to the above-noted deposit account.

Respectfully submitted,
TOWNSEND and TOWNSEND

William Michael Hynes

By _____
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